

ADDITIONS TO THE ODONATA OF MASSACHUSETTS¹Harold B. White, III², Paul S. Miliotis³ and Christopher W. Leahy⁴

ABSTRACT: The following Odonata are reported from Massachusetts for the first time: *Argia apicalis* (Say), *Argis translata* Hagen, *Coenagrion resolutum* (Hagen), *Enallagma vernale* Gloyd, *Gomphus scudderi* Selys, *Somatochlora cingulata* (Selys), *Somatochlora elongata* (Scudder), *Somatochlora forcipata* (Scudder), *Somatochlora georgiana* Walker, *Somatochlora linearis* (Hagen), *Somatochlora williamsoni* Walker and *Pantala hymanaea* (Say).

DESCRIPTORS: Odonata, Massachusetts

Howe (1917-1920; 1921) compiled the records of New England Odonata listing 139 species from Massachusetts. Subsequent additions (Bromley, 1924; Montgomery, 1943; Gibbs and Gibbs, 1954; Needham and Westfall, 1955; Beatty and Beatty, 1969; and White, 1969) and the elimination of some questionable records listed by Howe leave approximately 143 species. We have collected extensively in Massachusetts since 1965 and have confirmed the presence of all but 17 of the previously reported species. In this note we document our records of 12 species of Odonata which are new for Massachusetts. They are *Argia apicalis* (Say), *Argia translata* Hagen, *Coenagrion resolutum* (Hagen), *Enallagma vernale* Gloyd, *Gomphus scudderi* Selys, *Somatochlora cingulata* (Selys), *Somatochlora elongata* (Scudder), *Somatochlora forcipata* (Scudder), *Somatochlora georgiana* Walker, *Somatochlora linearis* (Hagen), *Somatochlora williamsoni* Walker and *Pantala hymanaea* (Say). The occurrence of *Somatochlora georgiana* is particularly notable since its previously known range was confined to five contiguous states in the extreme southeastern United States.

¹ Accepted for publication: January 15, 1974

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In the annotated list that follows, the collector's initials will appear with each record. We are grateful to Drs. Thomas W. Donnelly and Rudolf A. Raff for records of theirs included here.

Argia apicalis (Say): Ponkapoag Pond, Canton, 1♂, 7/25/70 (HBW); Charles River, Dover, 1♂, 9/6/70 (HBW); Charles River, South Natick, 2♂, 3 pr., 7/10/71 (HBW); Charles River, Wellesley, seen 6/30/71 (HBW); North Pond, Hopkinton, 2♂, 7/28/72 (PSM); Concord River, Concord, 1♂, 8/6/72 (PSM); Merrimack River, Dracut, 1♂, 7/17/73 (PSM).

These are the first records for *A. apicalis* in New England. It would appear that it is generally distributed along the major rivers of eastern Massachusetts.

Argia translata Hagen: Walden Pond, Concord, 1♂, 1pr., 9/11/66; 1♀, 1pr., 9/12/70; 1♂, 1pr., 8/14/71 (HBW); North Pond, Hopkinton, 2♂, 8/17/72 (PSM).

Both ponds where we have taken *A. translata* have rock and gravel shores with virtually no emergent vegetation. Other species of Odonata are quite scarce at both locations. The specimens were collected on rocks and dead twigs in and near the water.

Coenagrion resolutum (Hagen): Cranberry Swamp, Hawley, 2♂, 6/23/71 (HBW), 1♂, 7/2/72 (PSM); beaver pond on Mill Brook, Hawley, 1♂, 1pr., 7/4/71 (HBW).

This species is undoubtedly more widespread in the Berkshires than is indicated here.

Enallagma vernale Gloyd: Wallace Pond, Ashburnham, 4♂, 6/1/69 (HBW); unnamed pond east of Fort Pond, Lancaster, 1♂, 6/7/69 (HBW); unnamed pond west of Shirley Airport, Shirley, 2♂, 6/7/69 (HBW); Priest Brook, Royalston, 1♂, 6/14/70 (HBW); Cheshire Pond, Ashburnham, 1♂, 6/10/71 (HBW); Hawk Swamp, Dunstable, teneral 5/7/73; 3♂, 5/17-20/73 (PSM).

Specimens from Ashburnham, Royalston, and Shirley were determined by Mrs. Leonora K. Gloyd. It is quite possible that most of the pre-1943 records for *Enallagma cyathigerum* (Charp.) in Massachusetts (Howe, 1917-1920) are *E. vernale*.

Gomphus scudderi Selys: Squannacook River, West Groton, 1♂ emerged July 1971 from a larva collected 5/16/71 (HBW).

Somatochlora cingulata (Selys): Unnamed pond on Mt. Greylock at an elevation of 3173 feet, Adams, 1♂, 7/9/73 (CWL).

Somatochlora elongata (Scudder): Stream into Bog Pond, Florida, 1♂, 8/22/70 (HBW); Cranberry Swamp, Hawley, 1♂ emerged 5/29/73 from larva collected earlier in the month (PSM).

Somatochlora forcipata (Scudder): County Road, Washington, 1♀, 7/10/73 (CWL).

Somatochlora georgiana Walker: Rantoul Pond, Ipswich, 1♀ (found dead in the water) 8/6/72 (CWL); Willow Dale State Forest, Ipswich, 3♂, 3♀, 8/18/73 (CWL).

The presence of this species in Massachusetts is entirely unexpected and quite remarkable. Its previous known distribution includes Alabama, Florida, Georgia, North Carolina and South Carolina. The fact that several specimens have been collected in successive years would indicate that a breeding population exists in northeastern

Massachusetts and that other specimens could be expected from any of the states on the Atlantic Coast. The six specimens from Willow Dale State Forest were taken in the late afternoon as they swarmed with other Odonata in a small clearing near a temporary pond. In this swarm were *Somatochlora tenebrosa* (Say), *Epitheca princeps* Hagen, and five species of *Aeshna*: *A. clepsydra* Say, *A. constricta* Say, *A. tuberculifera* Walker, *A. umbrosa* Walker, and *A. verticalis* Hagen. Of these species, *A. constricta* was the most abundant.

We thank Kenneth Knopf for loaning the specimens of *S. georgiana* from western Florida which we used in confirming our identification.

Somatochlora linearis Hagen: Cranberry Pond, Braintree, 2♂, 7/21/68 (HBW); 1♀, 6/29/69 (HBW); 2♀, 7/12/70 (HBW,RAR); Massachusetts Audubon Broadmoor Sanctuary, South Natick, 1♂, 7/10/71 (HBW); Boston Brook, North Andover, 1♂, 8/17/71; 1♂, 2♀, 8/12/73 (CWL); Bedford Road, Lincoln, 1♂, 7/27/72 (CWL).

Somatochlora williamsoni Walker: Cranberry Brook, Braintree, 1♂, 7/28/69 (TWD); Ponkapoag Bog, Canton, 1♂, 8/21/69; 1♂, 8/8/70; seen 7/11/71 (HBW); Tyler Pond, Florida, 1♂, 8/22/70 (HBW); Depot Street, Dunstable, 1♂, 8/18/71; 2♂, 1♀, 8/3/73 (PSM); Lowell Dracut State Forest, Dracut, 1♂, 7/13/73 (PSM); Willow Dale State Forest, Ipswich, 1♀, 7/16/72 (CWL); Center Street, Savoy, 1♂, 8/1/72 (CWL).

Pantala hymanaea (Say): Great Blue Hill, Milton, seen 8/20/67 (HBW).

Although sight records of Odonata are not always reliable, this species is quite distinctive and is reasonable to expect in Massachusetts (White and Morse, 1973).

LITERATURE CITED

- Beatty, G. H. and A. F. Beatty. 1969. Evolution and speciation in the subgenus *Schizuraeschna*, with observations on *Aeshna* (*Schizuraeschna*) *mutata* Hagen (Odonata). Pa. Acad. Sci. Proc. 43: 147-152.
- Bromley, S. W. 1924. A new Ophiogomphus (Aeschnidae: Odonata) from Massachusetts. Ent. News 35: 343-344.
- Gibbs, R. H., Jr. and S. P. Gibbs. 1954. The Odonata of Cape Cod, Massachusetts. N. Y. Ent. Soc. 62: 167-184.
- Howe, R. H., Jr. 1917-1920. Manual of the Odonata of New England Parts I-VI. Thoreau Mus. Nat. Hist. Mem. 2: 1-14.
- . 1921. Supplement to Manual of Odonata of New England. Thoreau Mus. Nat. Hist. Mem. 2: 1-14.
- Montgomery, B. E. 1943. *Williamsonia fletcheri* Williamson (Odonata: Cordulidae) from New England. Ent. News 54: 1-4.
- Needham, J. G. and M. J. Westfall, Jr. 1955. A Manual of the Dragonflies of North America (Anisoptera). Berkeley & Los Angeles, Univ. Calif. Press, p 193 & 211.
- White, H. B., III. 1969. Two species of Odonata previously unreported from New England. Ent. News 80: 88.
- . and W. J. Morse. 1973. Odonata (Dragonflies) of New Hampshire: an annotated list. Res. Report 30, N. H. Ag. Exp. Sta., Durham. iv+46 pp.